AMENDMENTS TO THE CLAIMS

1 (Currently Amended). A system for treating a thoracic cavity comprising

an ultrasound applicator adapted to be coupled to an electric signal generating machine to generate ultrasound energy, the ultrasound applicator being sized to be placed to the chest of an individual to transcutaneously apply ultrasound energy to the thoracic cavity,

an assembly worn on the chest and affixed to the ultrasound applicator, to stabilize placement of the ultrasound applicator on the chest during application of ultrasound energy, the assembly including components worn about the neck and/or back that leave the chest on opposing lateral sides of the ultrasound applicator uncovered, to not impede placement of another treatment device on the chest alongside the ultrasound applicator at the same time the ultrasound applicator is stabilized on the chest by the assembly, and

an agent administered to the individual to promote dissolution of thrombi before, during, or after application of the ultrasound energy~~, the agent being selected from a group consisting essentially of a thrombolytic agent, an anticoagulant, an antiplatelet drug, a fibrinolytic drug, or aspirin, or combinations thereof, or in combination with one or more thrombolytic agents, or microbubbles, or microparticles~~.

2 (Canceled).

3 (Currently Amended). A system according to claim ~~2~~ 1

wherein the ~~assembly includes~~ components include a quick release mechanism.

4 (Currently Amended). A system according to claim ~~2~~ 1

wherein the ~~assembly includes~~ components include a quick release material.

5 (Currently Amended). A system according to claim ~~2~~ 1

wherein the ~~assembly comprises~~ components include a sling worn between the waist and shoulders.

6 (Currently Amended). A system according to claim ~~2~~ 1

wherein the ~~assembly includes~~ components include a halter worn about the chest and shoulders.

7 (Canceled).

8 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer to transcutaneously apply ultrasound energy to the thoracic cavity, the ultrasound transducer being sized to provide a power density not exceeding 3 watts/cm^2 at a maximum total power output of no greater than 200 watts operating at a fundamental therapeutic frequency not exceeding 500 kHz.

9 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing that includes a chamber to hold fluid about the ultrasound transducer.

10 (Original). A system according to claim 9

wherein the housing accommodates circulation of fluid about the ultrasound transducer.

11 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing carrying the ultrasound transducer that includes an ultrasound conducting interface.

12 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing carrying the ultrasound transducer that includes a contour-conforming interface with skin.

13 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing carrying the ultrasound transducer that includes a skirt that spaces the ultrasound transducer from contact with skin.

14 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing carrying the ultrasound transducer that includes an ultrasound-conducting membrane for contacting skin.

15 (Original). A system according to claim 1

wherein the ultrasound applicator includes an ultrasound transducer and a housing carrying the ultrasound transducer that includes a coupling assembly to releasably couple the ultrasound transducer to an external electric signal generating machine.

16 (Original). A system according to claim 15

wherein the coupling assembly includes a quick coupling mechanism.

17 (Canceled).

18 (Currently Amended). A system according to claim ~~17~~ 1

wherein the agent includes a thrombolytic agent.

19 (Currently Amended). A system according to claim ~~17~~ 1

wherein the agent includes an anticoagulant.

20 (Currently Amended). A system according to claim ~~17~~ 1

wherein the agent includes an antiplatelet drug.

21 (Currently Amended). A system according to claim ~~17~~ 1

wherein the agent includes a fibrinolytic drug.

22 (Currently Amended). A system according to claim ~~17~~ 1

wherein the agent includes aspirin.

23 to 50 (Canceled).

51 (Currently Amended). A system according to claim ~~38~~ 1

wherein the electric signal generating machine is battery powered.

52 to 59 (Canceled).

60 (Currently Amended). A system according to claim ~~38~~ 1

wherein the electric signal generating machine includes a controller to generate electrical signals to operate the ultrasound applicator during a treatment session to produce pulsed ultrasound energy.

61(Currently Amended). A system according to claim ~~38~~ 1

wherein the electric signal generating machine includes a controller to generate electrical signals to operate the ultrasound applicator during a treatment session to produce continuous ultrasound energy.

62(Currently Amended). A system according to claim ~~38~~ 1

wherein the electric signal generating machine includes a controller to generate different electrical signals to operate the ultrasound applicator during a treatment session to produce ultrasound energy in at least two different modes, each mode comprising a different frequency, or a different output power level, or both.

63 (Original). A system according to claim 62

wherein, in at least one of the modes, the controller generates pulsed electrical signals.

64 (Original). A system according to claim 62

wherein, in at least one of the modes, the controller generates continuous electrical signals.

65 (Original). A system according to claim 62

wherein, in at least one of the modes, the controller generates both pulsed and continuous electrical signals.

66 (Original). A system according to claim 65

wherein the controller generates both pulsed and continuous electrical signals in a prescribed sequence.

67 (Original). A system according to claim 65

wherein the controller generates both pulsed and continuous electrical signals in a random sequence.

68 (New). A system according to claim 1

wherein the agent is selected from a group consisting essentially of a thrombolytic agent, an anticoagulant, an antiplatelet drug, a fibrinolytic drug, or aspirin, or combinations thereof, or in combination with one or more thrombolytic agents, or microbubbles, or microparticles.